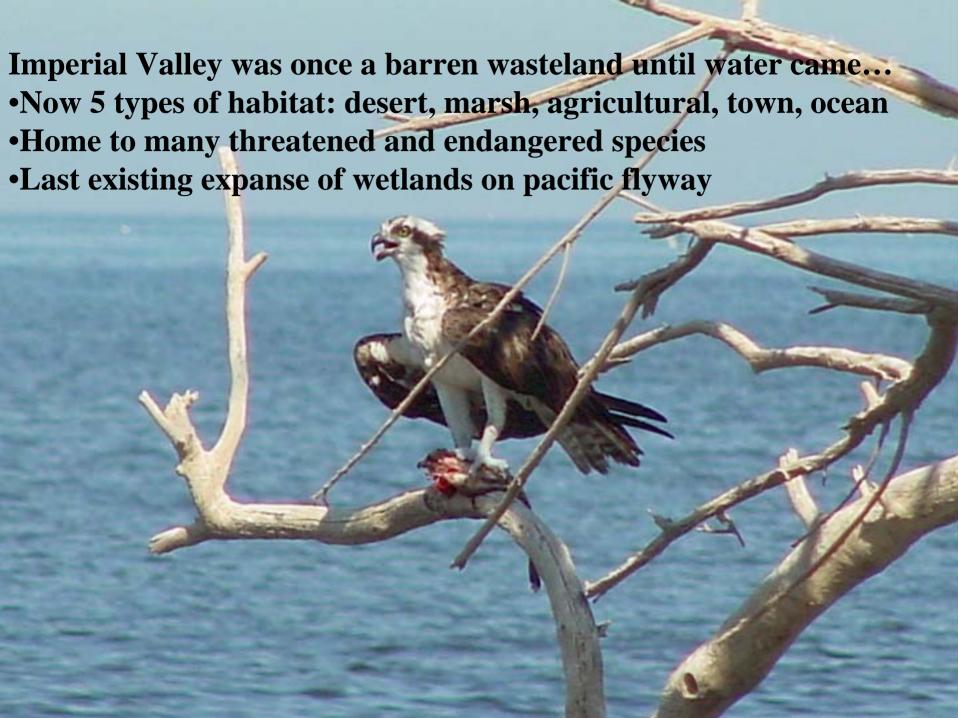
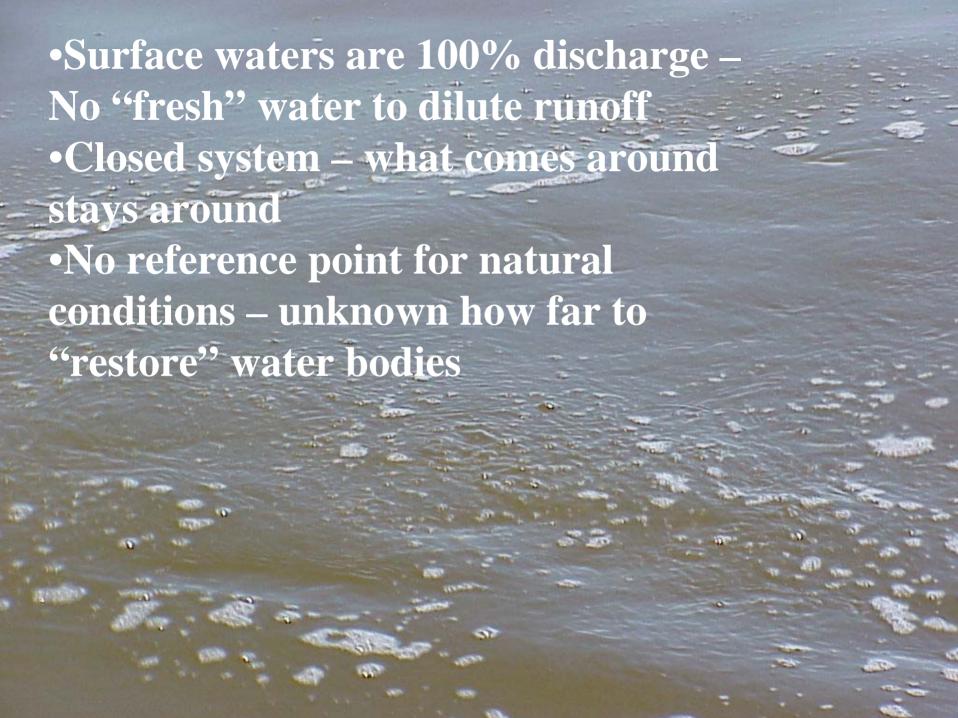


Salton Sea Advisory Committee Meeting April 2004

By Nicole Rothfleisch & Al Kalin









Watershed Assessment:

- •6257 fields (+ tilewater) discharging into
- •1406 miles of drainage channels
- •175 drain discharge points into
- •100 miles of river discharging into
- •500 square miles of surface area of the Salton Sea







Regulatory Scenarios



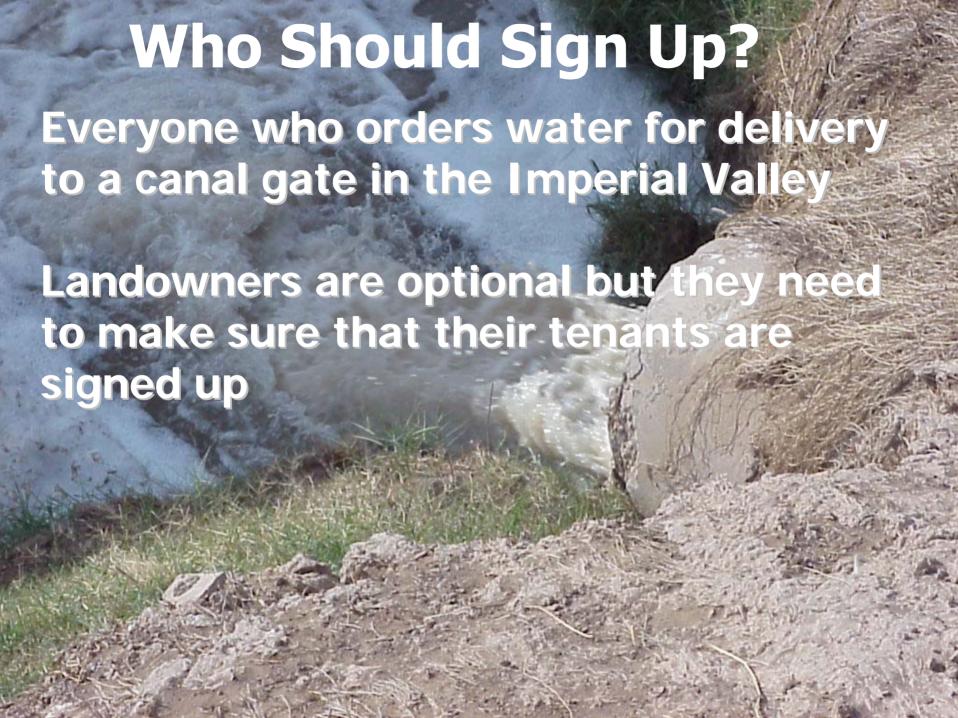
•Enlists the practical genius of individual farmers to restore, enhance and protect watershed resources



•Relies on regulatory bureaucrats to develop prescriptive compliance measures regardless of specific conditions

What is Voluntary Compliance?

- It's not really voluntary if you want to avoid more stringent controls.
- Requires the approval of the Regional Board to remain compliant
- Is usually measured by implementation milestones as opposed to numeric targets
- The voluntary aspect is that farmers get to choose which BMPs to implement vs. the Regional Board telling them how to farm



Participation Advantages

- •Gives individuals assistance in meeting TMDL requirements
- Allows growers to maintain control over their own farming operations and protects them from individual scrutiny from the Regional Board
- •Growers who are participating in the program are not subject to additional enforcement actions

What is Farm Bureau's Responsibility?

- Organization of program membership
- ·Provide technical and other assistance to participants
- ·Liaison between regulatory agencies and farmers
- Educate regulatory agencies and farmers
- Obtain and maintains grants to run program



Other Agencies Assisting ICFB

- Imperial Irrigation District
- UC Cooperative Extension
- Natural Resource Conservation Service
- California Farm Bureau Federation
 - Local Growers



How TMDLs Will Be Enforced

- •Farmers had to submit Farm Water Quality Management plans through the website for each field by SEPTEMBER 1, 2003.
- If a farmer is caught who has not turned in his plans, he will be considered out of compliance and can be fined \$1000 per day per drain.
- •The Regional Board will monitor the water for the next 3 years without further enforcement.
- If no progress is made after 3 years, some sort of enforcement may occur.
- If some progress is made, farmers will have about 12 years total to be in complete compliance.

What Should Growers be Doing Right Now?

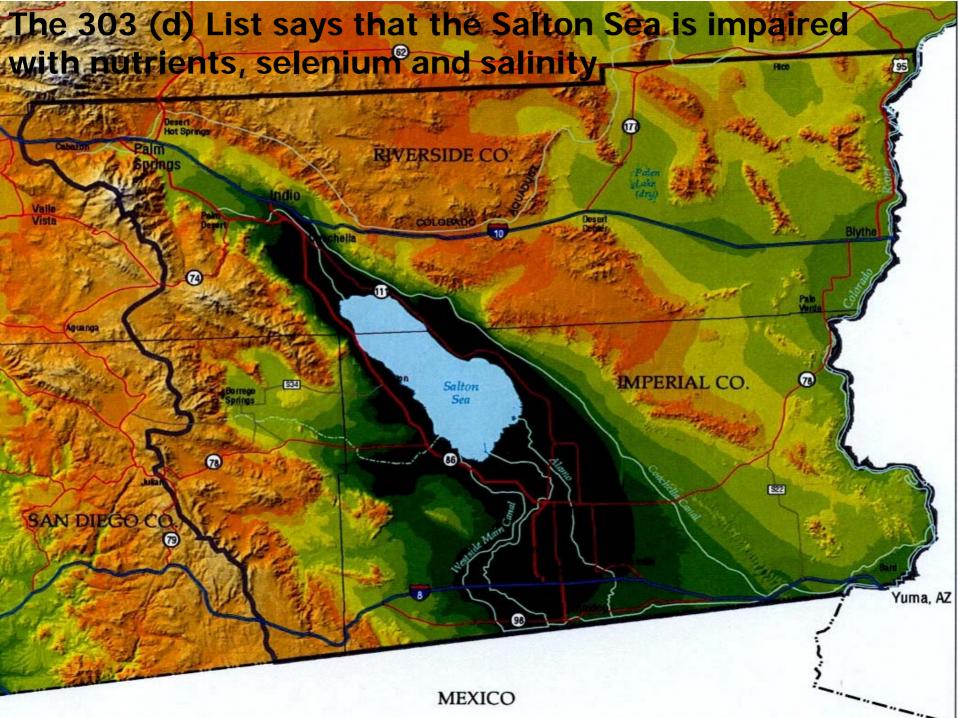
- •Sign up for the Voluntary TMDL Compliance Program (in person or on website).
- •Submit Farm Water Quality Management Plans via the website.
- Implement BMPs and document how they are working.
- Check out meter (optional) to determine your water quality
- Attend all TMDL meetings and field days

TMDL Status

 Silt TMDL for Alamo River, New River and IV Drains adopted



- Phosphorous TMDL for the Salton Sea currently being developed by TAC and RWQCB
- Other TMDLs are being developed for the rivers, however, they do not directly affect the farmers



The 303(d) List says that the New River is impaired by silt and pesticides, each of which are attributable to ag. There are other impairments listed attributable to Mexico.



The 303(d) List says that the Alamo River and the Imperial Valley Drains are impaired by silt, selenium and pesticides, all of which are attributable to ag.









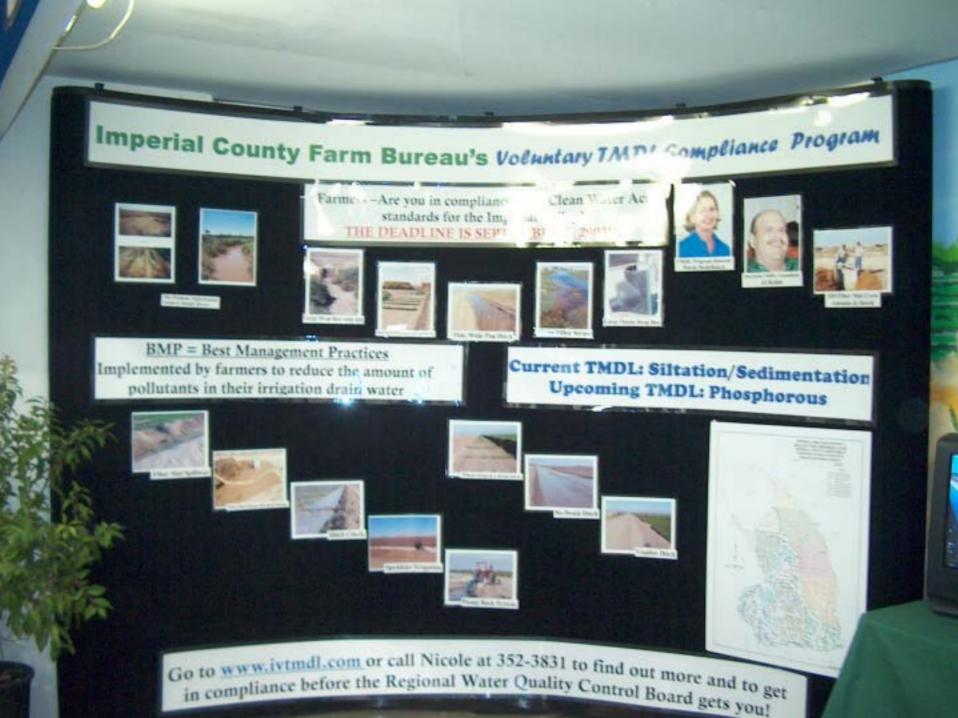


What Has Farm Bureau Done?

Increased Awareness of TMDLs & BMPs through the following venues:

- Monthly Column for IV Press
- Articles for ICFB Newsletters
- Articles for IVVGA Newsletters
- Article in UC Cooperative Ext. Newsletter
- Article in Ag Alert Newspaper
- Ad in Valley Grower Magazine
- Ads in IV Press
- •7 Billboards in high farmer traffic areas
- Booth at CA Mid-Winter Fair





What Has Farm Bureau Done cont....

Increased TMDL & BMP Awareness through presentations to the following groups:

- •ICFB Young Farmers & Ranchers
- Pest Control Advisors Convention
 - Alfalfa Growers Symposium
- •CA Farm Bureau Federation Water Advisory Committee
- Soil Science & Irrigation Classes at Imperial Valley College
 - Cal Poly State University Professors
 - Future Farmers of America
 - Various Rotary Service Clubs
 - Desert Research Extension Center Field Day
 - CA Non-Point Source Conference

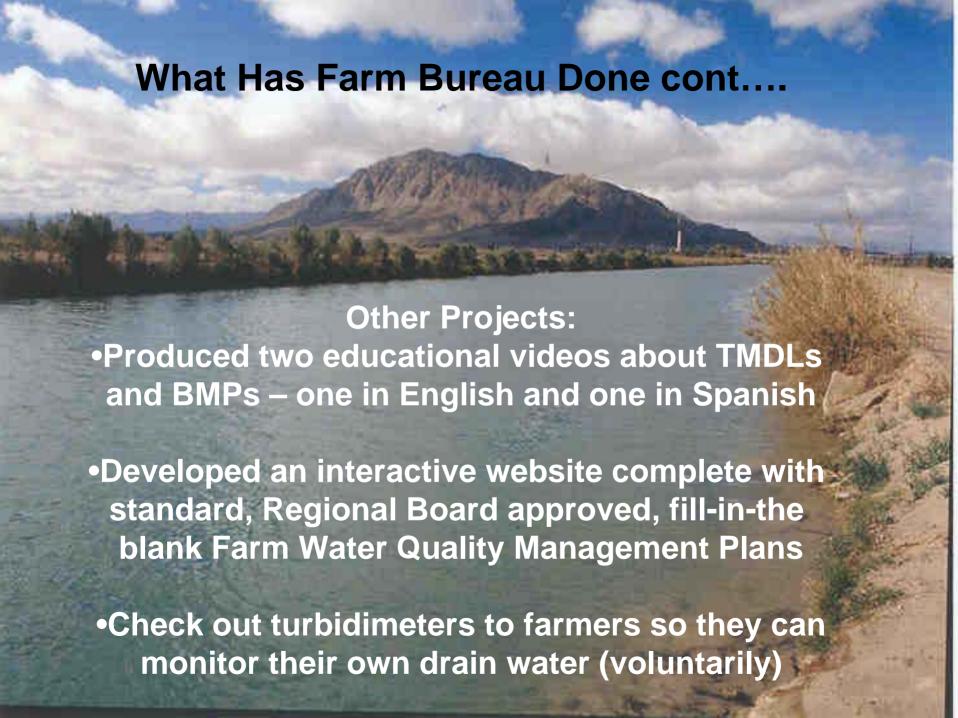
What Has Farm Bureau Done cont....

Attend meetings and keep in close contact with the following groups to exchange information and keep everyone informed of TMDL status:

- Various Farm Bureau committees
- •California Farm Bureau Federation
 - & other County Farm Bureaus
- Imperial Valley Vegetable Growers Association
 - Imperial Irrigation District
 - IID Water Conservation Advisory Board
 - Coalition of Labor, Agriculture & Business
 - County of Imperial

What Has Farm Bureau Done cont.... Developed informational papers such as: Outline of Participant Responsibilities Frequently Asked Questions Fact Sheet Instructions For Filling Out Forms on Website How To Use The Turbidimeter Sample Monitoring Data Form Farm Water Quality Management Plan Form Sample Lease Language For Landowners







The mission of the Imperial County Farm Bureau Voluntary TMDL
Compliance Program is to inform Imperial Valley farmers of water
quality issues and regulations, educate and demonstrate to them
best management practices for reducing impairments they may drain
into local waterways and serve as liaison between the farm community
and the Regional Water Quality Control Board.

"To inform, educate and demonstrate how to reduce impairments in drainwater."

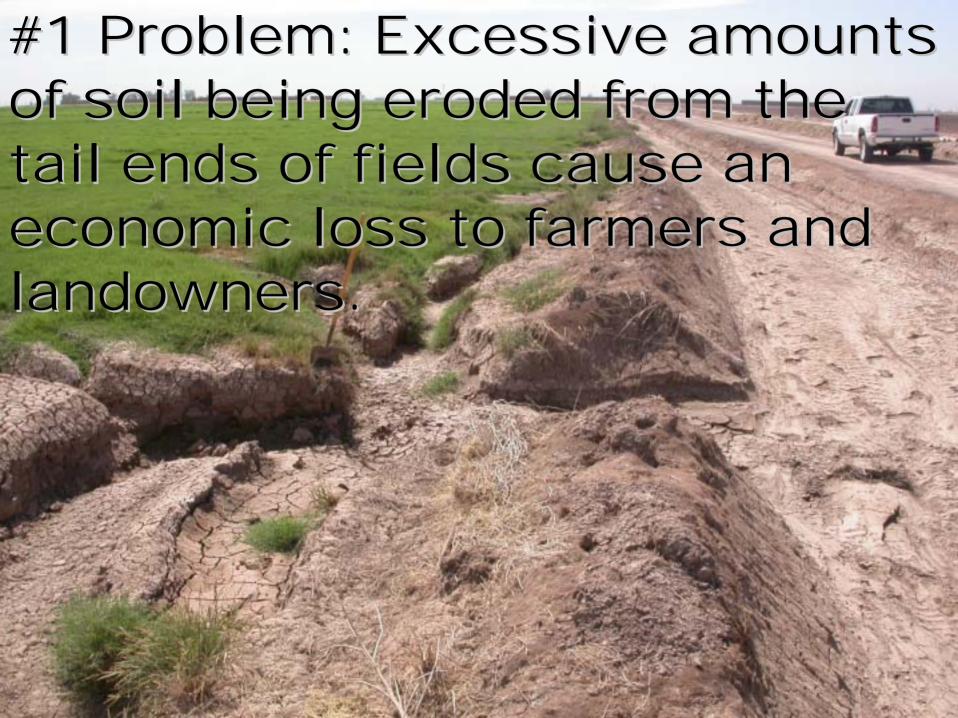
Where We Are At Now

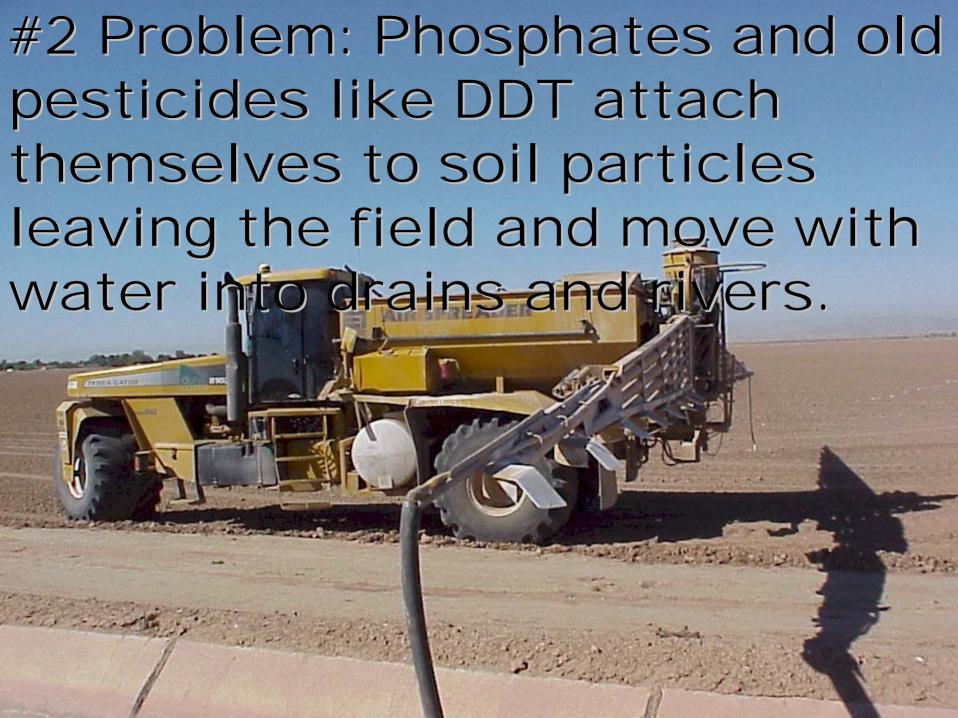
- •90% farmable acres have completed Farm Water Quality Management Plans
 - Unofficial monitoring results show dramatic progress in reducing silt loading
 - •Continue to participate in Salton Sea Nutrient
 TMDL Technical Advisory Committee
- Continue to educate individual farmers on BMPs

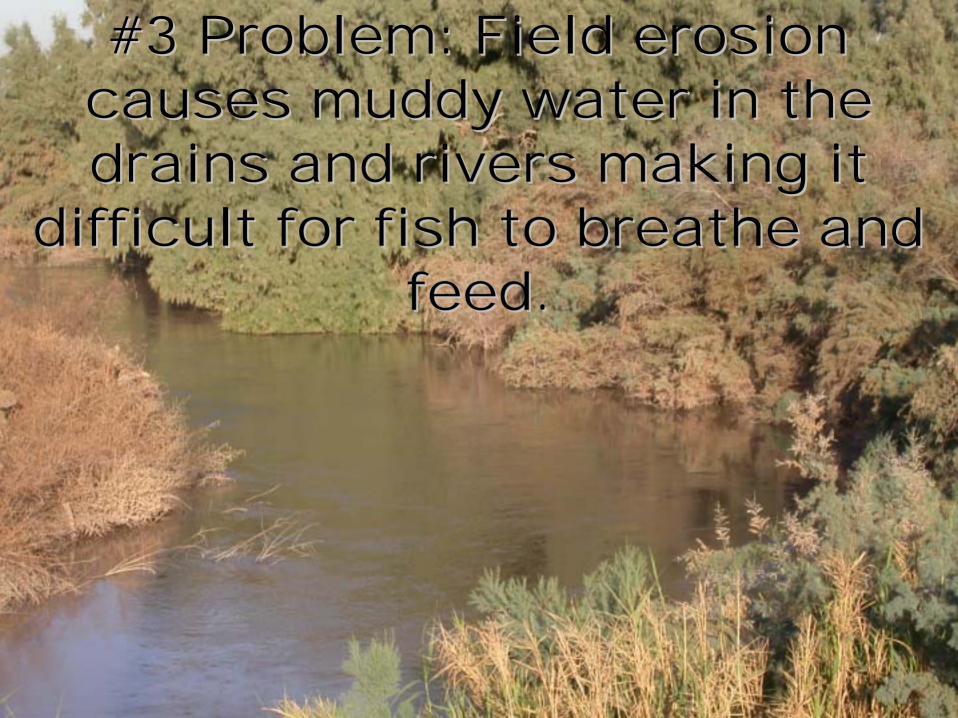




Al Kalin - Imperial County
Farm Bureau TMDL On-Farm
Consultant

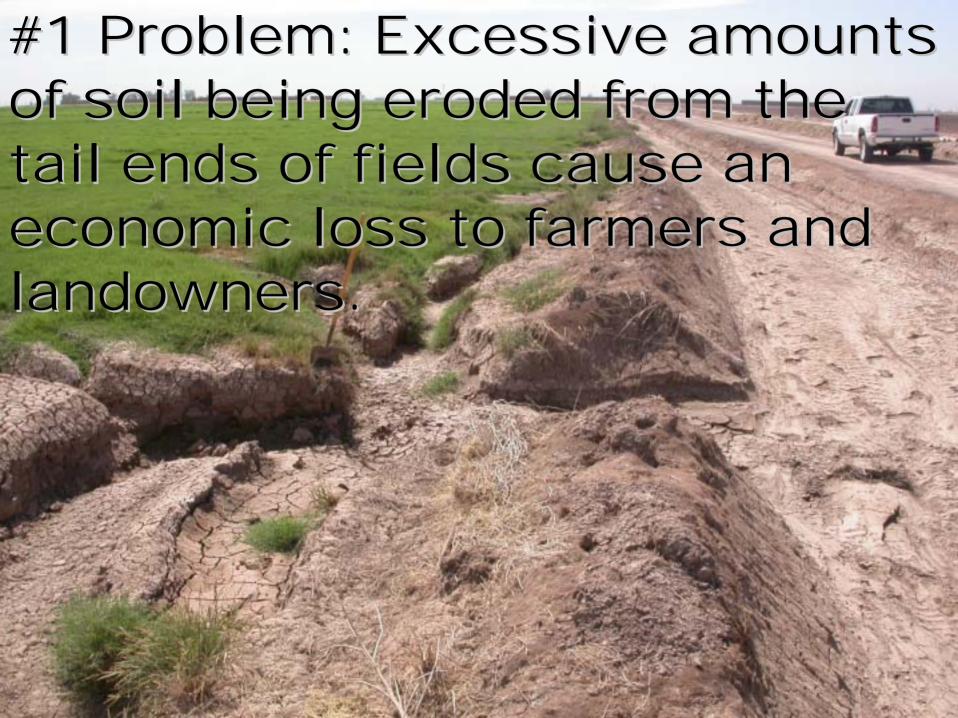






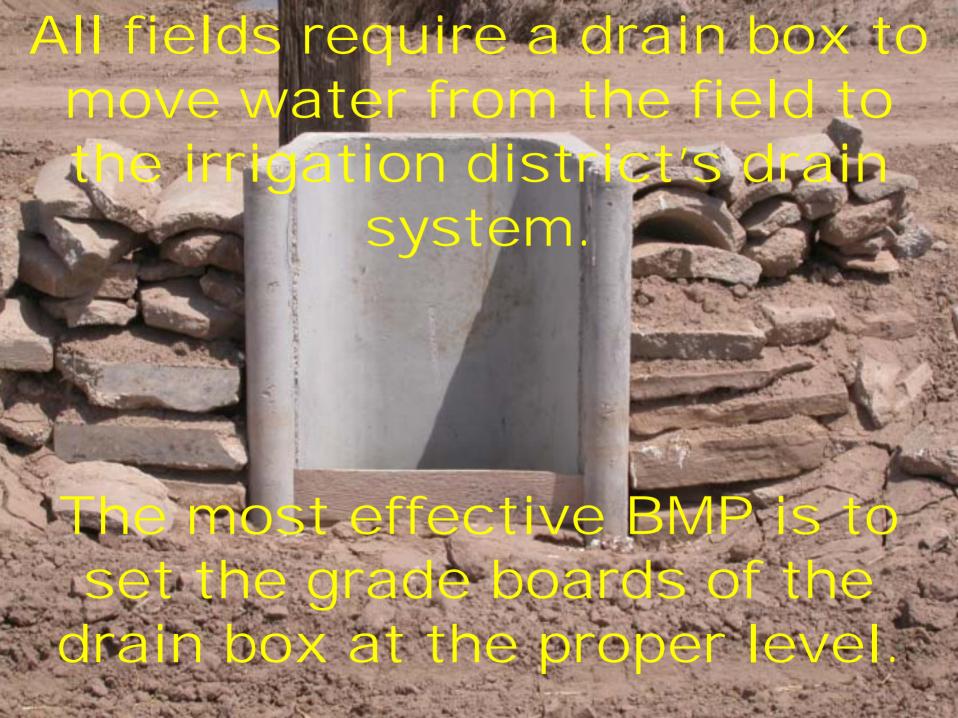
The key was to find the most effective BMPs with the least cost to implement.

As a farmer I was able to use my own fields to experiment with many BMP's to determine which were the most effective.



The main problem occurs at the bottom end of the field as water exits the crop into the field drain and heads towards the irrigation district's drain.

I found that water remained clear if velocity was kept below 36 feet per min.











Before TMDLs the deep V-ditch was the most popular style of drain.

It creates excessive amounts of silt and washing due to the faster velocity of the water which is always concentrated at the bottom of the "V".

Early testing showed that a wide, shallow "PAN" ditch was neach more effective in moving the drain water at a much slower speed.

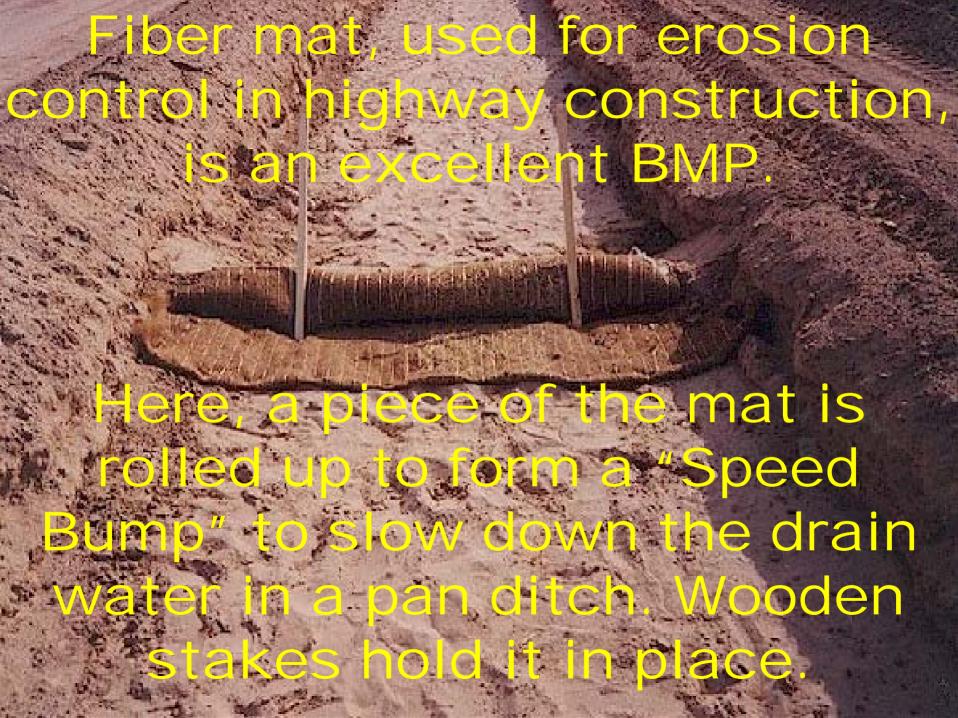
A wide pan ditch and a wide drain box, working together, are two excellent BMP's.

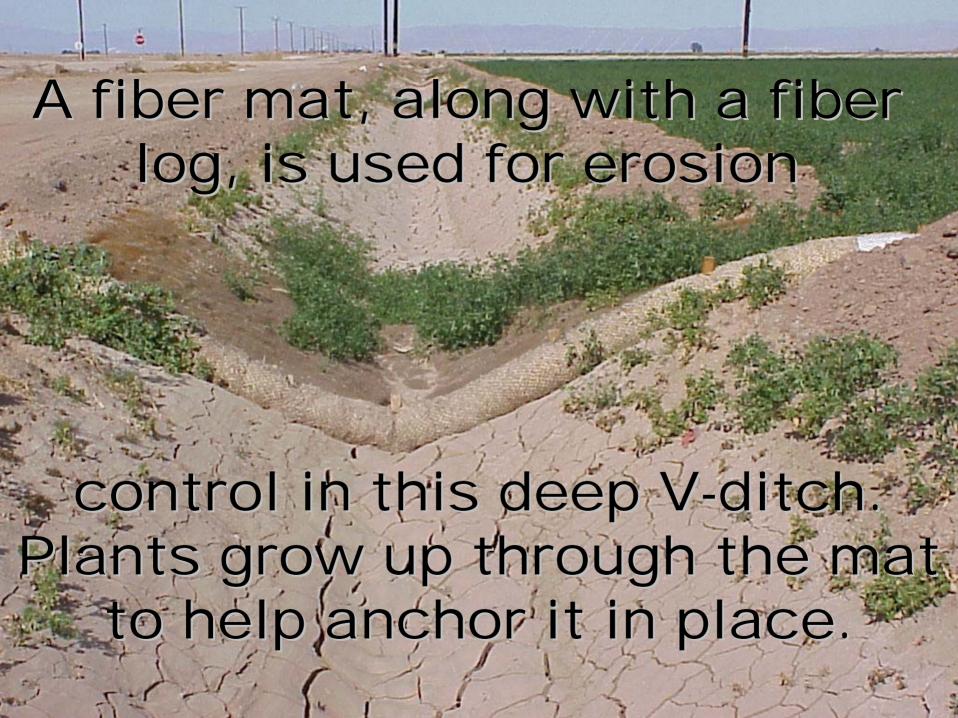
On certain crops and soil conditions "No Drain Ditch" is an excellent BMP especially if it includes a natural filter strip

of vegetation like this Bermuda Grass field. Prior erosion increases velocity of drain water on the lower end.







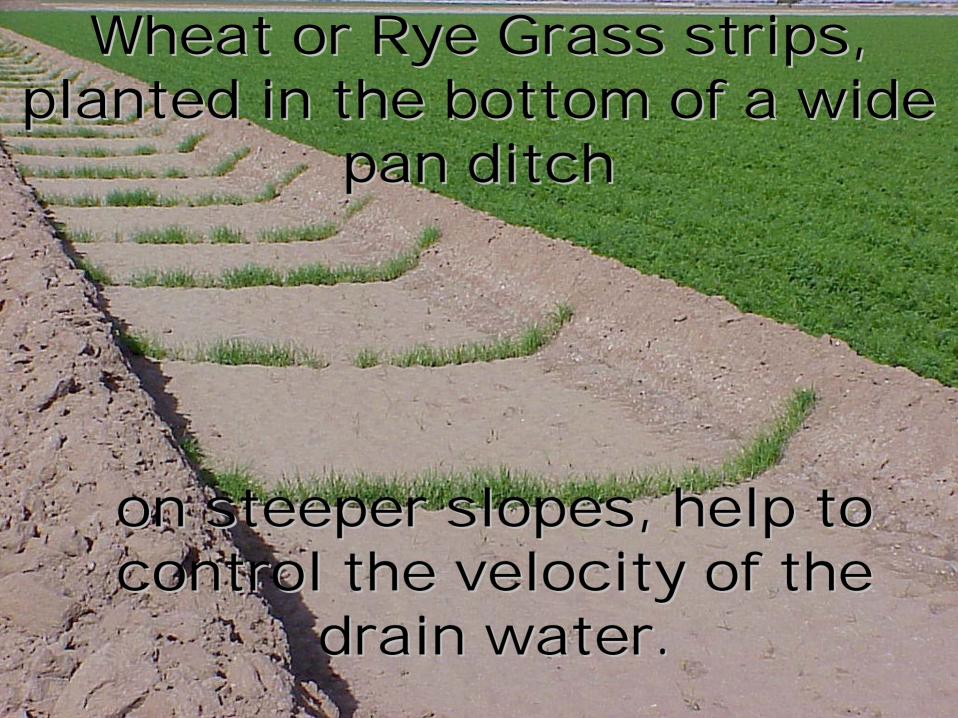






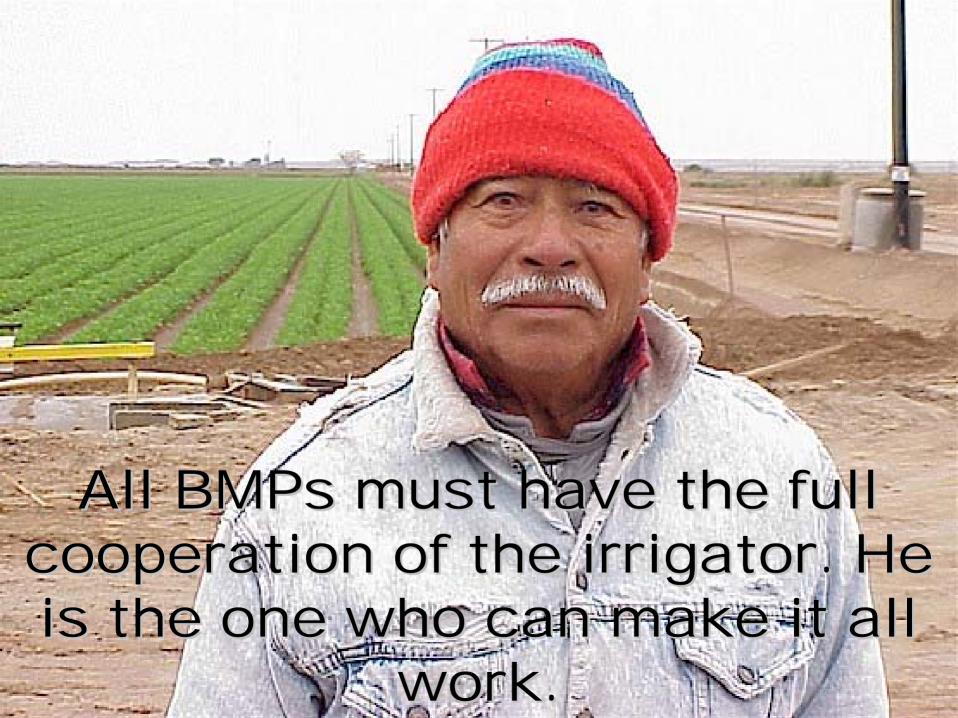
Furnow checks ("C Taps") are placed in the furnows to back the water up and allow the planted bed to become wetter.

This slows the water down and reduces furrow erosion.







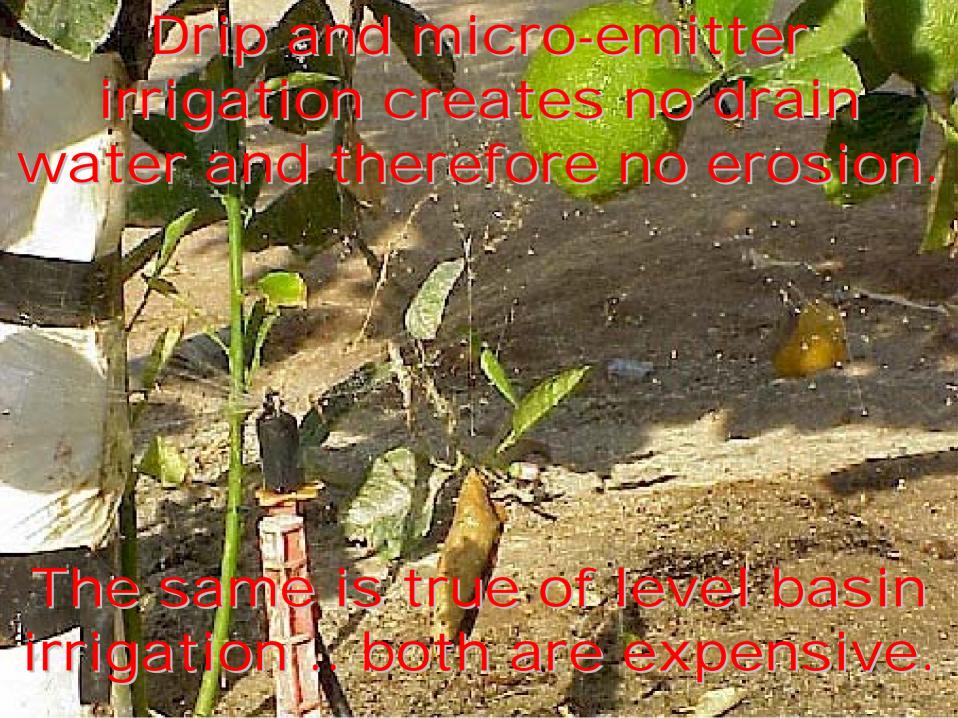








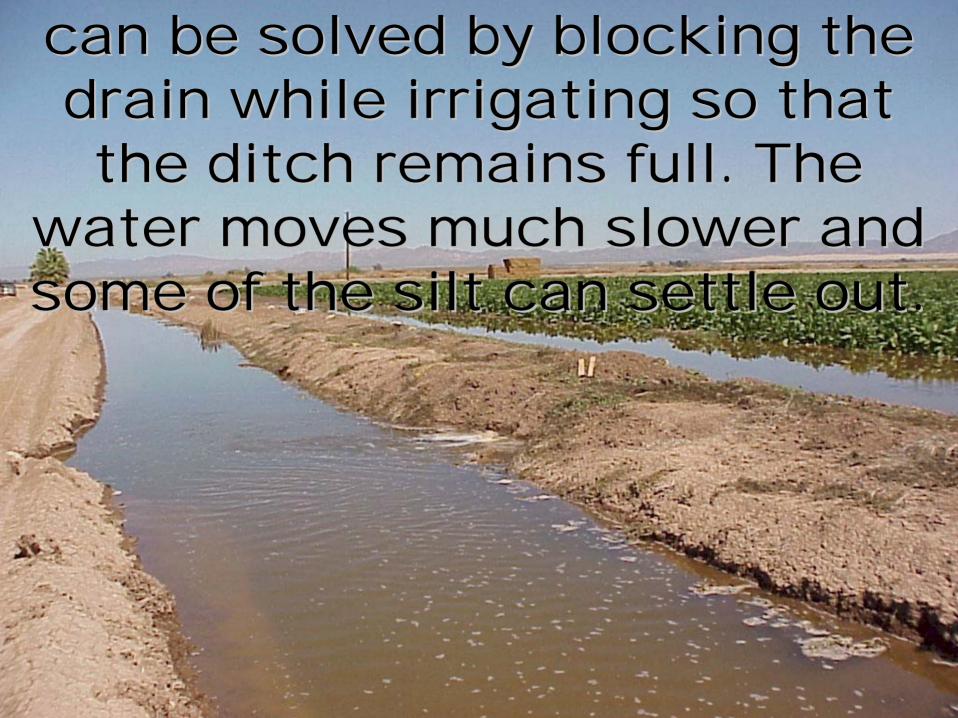




Sprinkler irrigation is a great BMP but the cost is high also.

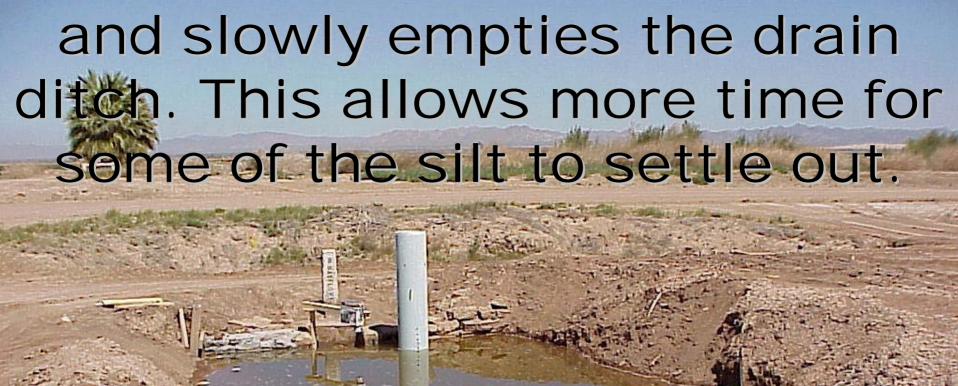












Half-drain ditches allow the drainwater to flow directly off the edge of the field into the drain ditch.

They are covered in at every cutting and then re-installed. They cause a tremendous amount of erosion.



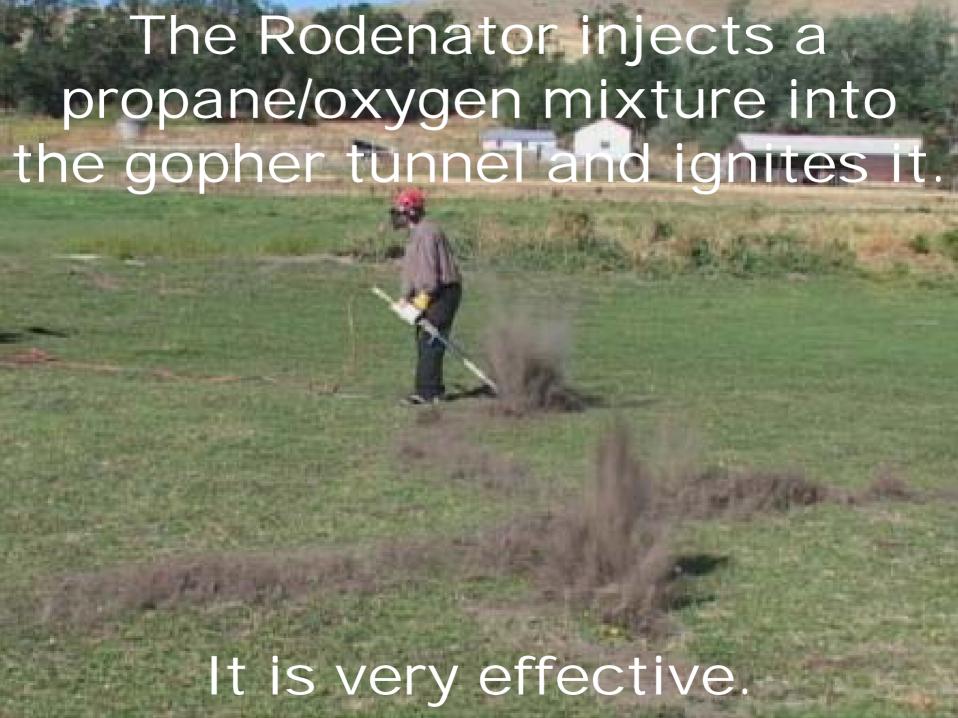




Gopher ditches can be very effective in stopping washouts.

In addition, a healthy population of Barn Owls can consume large numbers of gophers every night.

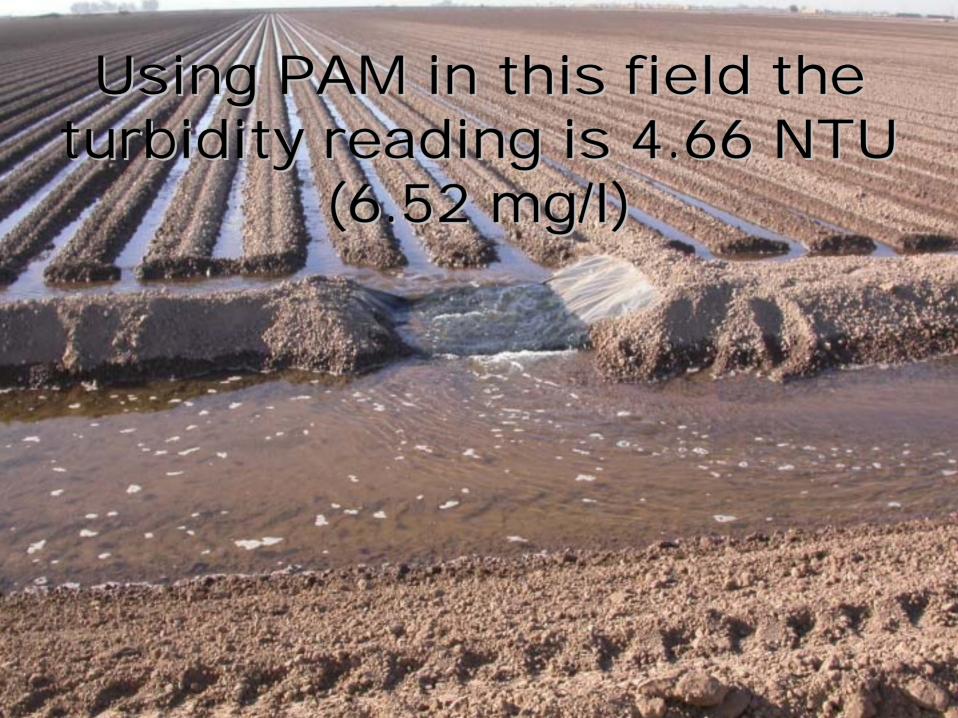




Polyacrilamides (PAMs) are a class of chemicals which clarify the water and effectively stop all erosion and washing. Until recently they have been too expensive to use.







Natural wetlands improve water quality before it reaches the Salton Sea



Over 1,000 acres of natural wetlands already exist along the Salton Sea shoreline





IID must implement a systemwide plan which keys on management techniques that will deliver the most silt reduction for the money spent.

This requires teaching IID drainage managers to find the most effective and least cost Best Management Practices



A recent small scale test using Polyacrylamides during drain cleaning showed a major reduction in silt during the cleaning process.

Turbidity of 1000+ mg/l downstream of the excavator was reduced to less than 20 mg/l with PAM being applied during cleaning.



